

LISTING OF THE CLAIMS

1-6. (Cancelled).

7. (Currently Amended) A method for ~~allowing users to virtually navigate a space~~
navigating an environment in three dimensions, the method comprising:

defining virtual paths in the environment;

capturing images of the ~~space~~ environment from a plurality of cameras;

receiving a navigation request;

generating a plurality of synthetic images corresponding to viewpoints along
predefined ~~the virtual~~ paths through the space;

selectively transmitting sequences ~~a sequence~~ of at least ~~some of the~~ synthetic
images ~~to the users~~ corresponding to viewpoints along at least two of the virtual
paths,

wherein the ~~transmitted~~ sequence ~~transmitted to each user~~ corresponds to a respective ~~the~~
navigation request ~~received from the user~~, the at least two of the virtual paths share a
common junction, and at least one of the synthetic images has a perspective different than
any of the plurality of cameras.

8. (Currently Amended) The method for ~~allowing users to virtually navigate a space~~ of
claim 7, wherein the transmitted sequence ~~transmitted to each user~~ comprises synthetic
images corresponding to viewpoints along ~~at least one predefined path~~ virtual paths that
most closely ~~matches~~ match the navigation request.

9. (Cancelled).

10. (Currently Amended) The method ~~for allowing users to virtually navigate a space~~ of claim 7, ~~further comprising the step of defining wherein~~ positions of the virtual paths and viewpoints are based at least in part on positions of the cameras.
11. (Currently Amended) The method ~~for allowing users to virtually navigate a space~~ of claim 7, wherein the defining step is performed before the generating and transmitting steps.
12. (Currently Amended) The method ~~for allowing users to virtually navigate a space~~ of claim 7, wherein the defining step is performed once and the capturing, receiving, generating, and transmitting steps are performed repeatedly.
13. (Currently Amended) A method for efficiently providing a ~~visual~~ virtual presence of within a three-dimensional scene to a plurality of simultaneous users, the method comprising:
 - defining a plurality of virtual paths within the scene, each path terminating at a junction;
 - defining a plurality of viewpoints along each virtual path;
 - capturing images of the scene from a plurality of cameras;
 - generating a synthetic image corresponding to each viewpoint;
 - combining synthetic images corresponding to the plurality of viewpoints along a virtual path to produce a sequence of images;
 - receiving a navigation request from at least one user of the plurality of simultaneous users;

selecting a virtual path of the plurality of virtual paths based on the navigation request;

~~displaying~~ transmitting a sequence of images corresponding to viewpoints along the selected virtual path to the at least one user,

wherein at least one of the synthetic images has an optical axis different than any of the plurality of cameras.

14. (Currently Amended) The method ~~for efficiently delivering a visual presence~~ of claim 13, wherein each sequence of images begins with an image from a viewpoint at a first junction and ends with an image from a viewpoint at a second junction.
15. (Currently Amended) The method ~~for efficiently delivering a visual presence~~ of claim 13, further comprising queuing a second navigation request received from the at least one user while a sequence of images is being ~~displayed~~ transmitted to the at least one user.
16. (Currently Amended) The method ~~for efficiently delivering a visual presence~~ of claim 13, wherein the plurality of cameras comprises pairs of cameras, each pair having ~~with~~ at least partially overlapping views and ~~substantially~~ similar viewing angles.
17. (Currently Amended) The method ~~for efficiently delivering a visual presence~~ of claim 13, wherein the plurality of cameras comprises cameras arranged substantially parallel to the virtual paths.
18. (Currently Amended) The method ~~for efficiently delivering a visual presence~~ of claim 13, wherein clusters of at least some of the plurality of cameras are located near junctions.

19. (Currently Amended) The method ~~for efficiently delivering a visual presence~~ of claim 13, wherein the plurality of simultaneous users comprises at least one thousand users.

20. (Currently Amended) A system for efficiently providing a virtual presence within a three-dimensional scene ~~to a plurality of users~~, the system comprising:

a plurality of cameras comprising pairs of cameras, each pair configured to capture at least partially overlapping views of at least a portion of the scene at similar viewing angles;

at least one image processor configured to generate synthetic images corresponding to viewpoints along predefined virtual paths within the scene and combine the images into sequences of images;

at least one router configured to select sequences in response to navigation requests;

at least one ~~user~~ processor configured to compose a video stream ~~for each user~~ comprising at least one sequence selected by the router;

a plurality of ~~user devices~~, each displays coupled to at least one ~~user~~ processor via a data network and configured to display a respective video stream,

wherein at least one of the synthetic images is from a perspective different than any of the plurality of cameras.

21. (Currently Amended) The system ~~for efficiently providing a virtual presence~~ of claim 20, wherein each sequence of images comprises synthetic images corresponding to the viewpoints along a virtual path.

22. (Currently Amended) The system ~~for efficiently providing a virtual presence~~ of claim 21, wherein at least some of the sequences of images comprise synthetic images corresponding to the viewpoints along two or more virtual paths sharing at least one common junction.
23. (Currently Amended) The system ~~for efficiently providing a virtual presence~~ of claim 20, wherein the at least one router is further configured to select a sequence comprising images from viewpoints along ~~a path~~, wherein the virtual path that best matches a navigation request.
24. (Currently Amended) The system ~~for efficiently providing a virtual presence~~ of claim 20, wherein the at least one processor comprises at least two processors and the system further comprising comprises a load balancer configured to balance ~~users~~ a load among the at least ~~one user processor~~ two processors.
25. (Currently Amended) The system ~~for efficiently providing a virtual presence~~ of claim 20, wherein the ~~user devices~~ displays are further configured to transmit navigation requests.
26. (Currently Amended) The system ~~for efficiently providing a virtual presence~~ of claim 20, wherein at least one of the ~~user devices~~ displays is a personal computer.
27. (Currently Amended) The system ~~for efficiently providing a virtual presence~~ of claim 20, wherein the data network is the Internet.
28. (Currently Amended) The system ~~for efficiently providing a virtual presence~~ of claim 20, wherein the system is configured to provide a virtual presence to more than one thousand simultaneous users.

29. (New) The method of claim 7, wherein the at least one of the synthetic images has an optical axis different than any of the plurality of cameras.
30. (New) The method of claim 13, wherein the at least one of the synthetic images has an optical axis parallel to an optical axis of at least one of the plurality of cameras.
31. (New) The method of claim 13, wherein the at least one of the synthetic images is from a perspective different than any of the plurality of cameras.
32. (New) The system of claim 20, wherein the at least one of the synthetic images has an optical axis different than any of the plurality of cameras.